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10/524,975	02/18/2005	Hiroshi Ito	U 015637-2	5591	
140	7590	02/22/2010	EXAMINER		
LADAS & PARRY LLP 26 WEST 61ST STREET NEW YORK, NY 10023		NILAND, PATRICK DENNIS			
		ART UNIT		PAPER NUMBER	
		1796			
			NOTIFICATION DATE		DELIVERY MODE
			02/22/2010		ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

[nyuspatactions@ladas.com](mailto:nyuspatactions@ladas.com)

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/524,975	ITO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Patrick D. Niland	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 07 October 2009.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-10 and 12-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-10 and 12-20 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/25/09 &amp; 11/19/09</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|   | 6) <input type="checkbox"/> Other: _____ .                        |

1. The amendment of 10/7/09 has been entered. Claims 1-10 and 12-20 are pending.
2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-10 and 12-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

A. There is not basis in the originally filed specification for the full scope of the newly presented claims 19 and 20. The examples do not support the full scope of the newly presented claim 19. The newly added scope is new matter. The claims are not limited to the scope of the instant specification pages 15-16 and 40 argued by the applicant. The instant claim encompasses combinations of ingredients and amounts thereof not disclosed in the instant specification. The argued molar ratios do not remedy this. The instant claims encompass at least ingredient limitations such as molecular weights, monomer identity and amount and sequence, polymer morphologies, functionality, solvent type and amount, coloring agent type and amount, all of which are expected to materially affect the instantly claimed properties. The specification does not teach all of the newly encompassed combinations of ingredients and amounts thereof that give the instantly claimed properties, as noted in paragraph 6 below. The newly added

material remains new matter. Even if the applicant's argument regarding narrowing is correct, the addition of the new matter is at issue here, not the scope of the claims. A claim can clearly be narrowed overall and yet have new matter in it. The applicant's arguments have been fully considered but are not persuasive for the above reasons. This rebuts the applicant's arguments regarding MPEP 2163.04. The rejection is not conclusory for the above stated reasons.

The applicant now argues that the rejection is unclear insofar as it does not refer to any specific recitations in the claims as allegedly not being supported by the [originally filed] specification. This is incorrect. The applicant has the text of their own claims and their own originally filed specification. The rejection clearly states "The newly added scope is new matter." The rejection further states "The instant claim encompasses combinations of ingredients and amounts thereof not disclosed in the instant specification. The argued molar ratios do not remedy this. The instant claims encompass at least ingredient limitations such as molecular weights, monomer identity and amount and sequence, polymer morphologies, functionality, solvent type and amount, coloring agent type and amount, all of which are expected to materially affect the instantly claimed properties. The specification does not teach all of the newly encompassed combinations of ingredients and amounts thereof that give the instantly claimed properties, as noted in paragraph 6 below." Thus, it should be clear that the entirety of the language of the instant claim 19, and now also claim 20 to the extent that it contains these issues, is rejected to the extent that the full language of claim 19 encompasses material not described in the originally filed specification, as is pointed out in the rejection to the extent possible considering the potentially infinite amount of new matter encompassed by the newly presented language. It is impossible to point out the full scope of new matter where it is

potentially infinite. The applicant clearly has the ability to show where each limitation of newly presented claims 19 and 20 is present in their originally filed specification and this task is not infinite, i.e. impossible. The above rejection is sufficient to show that the full scope of the instant claims 19-20 is not described in the originally filed specification, to the extent it is possible to demonstrate the infinite list of added new matter. The applicant has not sufficiently demonstrated that the limitations of the newly added claims 19 and 20 are present in the originally filed specification, e.g. a finite task that would readily overcome this rejection. The examiner agrees that the broad terms argued are seen in the instant specification. However, the narrowing terms clearly present in the applicant's claim language are not seen and are not specifically pointed out in the applicant's response. The above statement "The instant claim encompasses combinations of ingredients and amounts thereof not disclosed in the instant specification. The argued molar ratios do not remedy this. The instant claims encompass at least ingredient limitations such as molecular weights, monomer identity and amount and sequence, polymer morphologies, functionality, solvent type and amount, coloring agent type and amount, all of which are expected to materially affect the instantly claimed properties. The specification does not teach all of the newly encompassed combinations of ingredients and amounts thereof that give the instantly claimed properties, as noted in paragraph 6 below." remains the position of the examiner regarding the actual language of the instant claims 19-20, including the specifics thereof such as those "noted at paragraph 5 below" in the office action of 4/9/09. A fair reading of the instant claims 19-20, the originally filed specification, and the instant rejection would have made these things clear. The applicant's arguments regarding the generic terms without the specifics of the instant claims 19-20 does not address the inherent issues of this rejection in that

the applicant's arguments are not commensurate in scope with the requirements of the instant claims 19-20 and therefore the basis of this rejection. Arguments regarding claim 1 do not address the basis of this rejection which does not reject claim 1. The intentional ignoring of the specifics of the applicant's own claims 19-20 is not responsive to the clear rejection set forth above.

The applicant's argument regarding the "wherein" clause as being the difference between claim 1 and claims 19-20 would be correct if they had not ended at "..and carboxylate groups in the dispersing resin in functional terms." The applicant's claim 19 clearly also recites material limitations from this argued endpoint to the end of the claim. It remains unclear where all of the claimed requirements are seen applied to the full scope of the invention. Examples are limited, specific embodiments of the invention. No caselaw is seen that applies specific embodiment limitations to the full, generic scope of a claimed invention where the originally filed application did not expressly apply these limitation of a narrower embodiment to the full generic disclosure. It remains the examiner's position that the full range of limitations of claim 19 necessarily adds some scope not present in the originally filed specification as well as probably narrows the scope in some aspects, as previously argued by the applicant. This stands to reason in that the newly required limitations, as they are applied to the more generic aspects of the instantly claimed inventions of the instant claim 19 rather than single embodiments thereof, e.g. the argued, limited examples, must necessarily create or read on combinations or subcombinations of ingredients not shown to be in possession of the applicant at the time of the originally filed specification. No probative evidence to the contrary is seen in the applicant's arguments. It is noted that narrowing may also be new matter where not described in the originally filed specification. See

Ex parted Grasselli for example. The examiner cannot point to specific examples given the breadth of the claim language, e.g. potentially infinite amount of scope added and the lack of disclosure thereof in the originally filed specification with regard to the full scope of the invention, i.e. not merely limited to single examples of scope which is less than that of the genera claimed. Furthermore, the applicant has not performed the possible task, i.e. not infinite, of showing where the claimed limitations are present in the originally filed specification.

The argued pages 56-57 do not give basis for the full ranges of the instantly claimed properties of the instant claims 19-20. This aspect of the above rejection clearly gives new scope. In re Wertheim is the most tolerant case law relating to ranges being derived from examples but does not allow for the ranges of the instant claim 19 to be claimed from exemplified points as the applicant has done. Again, the full scope of the instant claims 19-20 is not seen in the originally filed specification and the applicant does not point it out other than to refer to limited examples which do not relate to the generic terms claimed, particularly to the full scope thereof. These examples also do not give the full scope of the particular ranges of the applicant's claim 19 and therefore the full scope of compositions read on by the instant claim 19 for the reasons stated above. The applicant fails to show otherwise. The argument "The specification conveys with reasonable clarity" does not apply to this rejection, which is not one of clarity but of "failing to comply with the written description requirement." The examiner asks where in the originally filed specification, the full scope of the instant claims 19 and 20 can be found. He cannot see it, including the newly claimed property ranges, which are specified nowhere in the originally filed specification in the form of the instantly claimed ranges and the examples can have no more than points of the claimed range. The full scope of the claimed

fluctuation range is not seen in the originally filed specification. Therefore, the full scope of the combinations and amounts of ingredients, which ultimately actually define compositions, is not seen in the originally filed specification, as is stated in the above rejection, which assumes the applicant reads their own claims and specification fully. Pages 5, 10-16, 40, and the entire originally filed specification also do not give the full scope of the actual claim language, particularly the specific ranges therein. The originally filed specification does not describe how to choose the carboxy ratio argued appropriately so as to give the full scope of the instant claims 19-20, particularly the full scope of the ranges therein.

The newly added material, e.g. the newly added scope added by the new language of the instant claims 19 and 20 that was not present in the originally filed specification, a comparison that would appear to be readily within the ability of the author/prosecutor of the application to perform, remains new matter. Clearly, the genus defined by the claims 19-20 is not fully described in the originally filed specification for the reasons stated above in conjunction with proper claim interpretation, e.g. reading all of the limitations specified therein, and consideration of the originally filed specification side by side with the language of the instant claims 19-20. The instant situation does not meet MPEP2163 or the argued caselaw for at least the above reasons. The applicant's arguments clearly ignores the scope of their claimed "fluctuation" ranges verses the scope thereof described in the originally filed specification. As stated above, this contributes largely to the instant rejection. This fact remains unrebutted by the applicant.

There is no probative evidence that the broad relating of the repeating unit ratios to stability broadly gives the specifics of the instant claims 19-20.

The applicant's arguments have been considered fully but are not persuasive for the reasons stated above. This rejection is therefore maintained.

B. There is not basis in the originally filed specification for the full scope of the newly presented claim language in claims 1 and 19, specifically "said dispersing resin being formed by polymerizing monomers comprising at least one monomer selected from the group consisting of styrene, acrylic acid, methacrylic acid, acrylate and methacrylate" and more particularly "at least one". The argued sections of the originally filed specification have been considered but basis for the full scope of the newly claimed limitation is not seen. The newly added scope is therefore new matter.

C. There is no description in the originally filed specification of the newly claimed matter of the instant claim 20, particularly "The aqueous ink composition according to claim 19, wherein the dispersing resin consists of repeating units having the carboxylic acid groups and repeating units having the carboxylic acid anion groups." The MPEP section describing "consisting" is noted. However, there is a technical problem with making the claimed dispersing resin of the instant claim 20. It is unclear how one would make the claimed polymer according to claim 19, from which claim 20 depends, and neutralize it according to claim 19 to give the claimed repeating units required of the instant claim 20, e.g. repeating units having the carboxylic acid groups and repeating units having the carboxylic acid anion groups. It is not seen that neutralization is able to target carboxylic acid groups so specifically as to give the claimed repeating units of the instant claim 20. This is not described in the originally filed specification. The newly added material is not enabled and is also new matter therefore.

5. Claim 20 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

A. There is no description in the originally filed specification of the newly claimed matter of the instant claim 20, particularly “The aqueous ink composition according to claim 19, wherein the dispersing resin consists of repeating units having the carboxylic acid groups and repeating units having the carboxylic acid anion groups.” The MPEP section describing “consisting” is noted. However, there is a technical problem with making the claimed dispersing resin of the instant claim 20. It is unclear how one would make the claimed polymer according to claim 19, from which claim 20 depends, and neutralize it according to claim 19 to give the claimed repeating units required of the instant claim 20, e.g. repeating units having the carboxylic acid groups and repeating units having the carboxylic acid anion groups. It is not seen that neutralization is able to target carboxylic acid groups so specifically as to give the claimed repeating units of the instant claim 20. This is not described in the originally filed specification. Particularly, the enabling specification does not describe how to target neutralizaiton so as to give the claimed repeating units of neutralized and unneutralized repeating units. Such neutralization is expected to be random. The newly added material is not enabled and is also new matter therefore.

6. Claims 19-20 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the disclosed compositions having the properties as required by the instant claim 19, does not reasonably provide enablement for all compositions

now encompassed but not enabled and described by the instant specification. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

The instant claims 19-20 encompasses a potentially infinite number of compositions having the claimed properties. The enabling specification does not describe nor give guidance commensurate in scope with In re Wands to enable the skilled artisan to make all of the compositions encompassed by the instant claim 19 without undue experimentation.

In re Wands has 8 criteria, (MPEP 2164.01(a)), as shown below.

- (A)The breadth of the claims;
- (B)The nature of the invention;
- (C)The state of the prior art;
- (D)The level of one of ordinary skill;
- (E)The level of predictability in the art;
- (F)The amount of direction provided by the inventor;
- (G)The existence of working examples; and
- (H)The quantity of experimentation needed to make or use the invention based on the content of the disclosure.

It is noted that the instant claims read on an infinite number of compositions (Wands factor A). The specification does not describe how to make all such compositions having the claimed properties which will function as required in the instant invention (Wands factors F, G). It would require an infinite amount of experimentation to determine how to make all of the compositions encompassed by the instant claims (Wands factor H). Chemistry is an unpredictable art (Wands

factor E). The ordinary skilled artisan has not imagined nor figured out how to make all of the compositions having the properties of the instant claim 19 yet (Wands factors C, D, E, F, G, and H). The enabling disclosure is not commensurate with the full scope of the claim 19.

See Sitrick v Dreamworks, LLC (Fed Cir, 2007-1174, 2/1/2008), particularly “Before MICHEL, Chief Judge, RADER and MOORE, Circuit Judges. MOORE, Circuit Judge.

**112(1) Enablement - The enablement requirement is satisfied when one skilled in the art, after reading the specification, could practice the claimed invention without undue experimentation**

We review the grant of summary judgment de novo. Liebel-Flarsheim Co. v. Medrad, Inc., 481 F.3d 1371, 1377 (Fed. Cir. 2007). Summary judgment is appropriate “if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(c). Whether a claim satisfies the enablement requirement of 35 U.S.C. § 112, ¶ 1 is a question of law, reviewed de novo, based on underlying facts, which are reviewed for clear error. AK Steel Corp. v. Sollac, 344 F.3d 1234, 1238-39 (Fed. Cir. 2003). The evidentiary burden to show facts supporting a conclusion of invalidity is one of clear and convincing evidence because a patent is presumed valid. Id. The “enablement requirement is satisfied when one skilled in the art, after reading the specification, could practice the claimed invention without undue experimentation.” Id. at 1244.

**112(1) Enablement - The full scope of the claimed invention must be enabled.**

**A patentee who chooses broad claim language must make sure the broad claims are fully enabled.**

The full scope of the claimed invention must be enabled. See Auto. Techs. Int'l, Inc. v. BMW of N. Am., Inc., 501 F.3d 1274, 1285 (Fed. Cir. 2007). The rationale for this statutory requirement is straightforward. Enabling the full scope of each claim is “part of the quid pro quo of the patent bargain.” AK Steel, 344 F.3d at 1244. A patentee who chooses broad claim language must make sure the broad claims are fully enabled. “The scope of the claims must be less than or equal to the scope of the enablement” to “ensure[] that the public knowledge is enriched by the patent specification to a degree at least commensurate with the scope of the claims.” Nat'l Recovery Techs., Inc. v. Magnetic Separation Sys., Inc., 166 F.3d 1190, 1195-96 (Fed. Cir. 1999).”

Arguments that the instantly claimed components are narrower in its definition of component (i) than "defined claim 19", which is taken as referencing the claimed components as defined in the instant specification are not persuasive because breadth or narrowness is not a subject of this rejection. It is based on scope of enablement as stated above. MPEP 2173.05(g) is noted. The rejection is not based on any argument that there is something inherently wrong with defining some part of an invention in functional terms. There is no statement in this rejection that functional language in and of itself renders the claims improper. Narrowing of the claims is not the basis of the

above rejection nor does it overcome the rejection above, assuming arguendo that the instant claim 19 is in fact narrowed relative to the instant specification. The rejection is based on the fact that the instant specification does not adequately teach how to choose the combinations of ingredients and amounts thereof encompassed by the instant claim language so as to give the required properties of the instant claims. There are an infinite number of compositions encompassed by the vast array of broadly recited components, particularly considering acid numbers, degrees of neutralization, molecular weights and other specifics of the claimed components encompassed by the instant claim language and it would require an undue amount of experimentation to determine how to manipulate/choose among all of these parameters to arrive at the claimed compositions and properties because the enabling specification does not give sufficient guidance in how to choose from the infinite list of components encompassed so as to arrive at the required properties of the instant claims. The applicant's arguments do not address the issue of this rejection. There is also no indication that the claims are in fact narrowed though even if they are the instant claims still contain the above stated scope of enablement issue, which is not a matter of breadth of the claims but is one of scope of enablement and sufficiency of the instant disclosure. It is noted that one could choose from the infinite lists of ingredients and arrive at the claimed invention where no properties, such as those of the instant claims are required readily. This situation would therefore be enabled fully though very broad. However, where one must choose from an infinite set of components and arrive at specific properties with little guidance as to how to choose the ingredients from the infinite list thereof that will give the required properties, this situation is not fully enabled though narrower. The above cited case law and Wands factors counter the applicant's arguments regarding MPEP 2163.02. Establishing the criticality of controlling the molar ratio of the unneutralized repeat units to total

repeat units for achieving the best storability is not the same as showing how to achieve it for all of the encompassed compositions. The instant claims are not limited to the parameters of page 15-16, bridging paragraph and page 40, last full paragraph. Furthermore, these sections do not address the other components and ingredient particulars encompassed by the instant claims, which are expected to materially affect the instantly claimed properties. The applicant's arguments do not show that the full scope of the instant claims is enabled by the enabling specification. Possession of the invention claimed at filing is not a subject of this rejection. This rebuts the applicant's arguments regarding MPEP 2163.04. The rejection is not conclusory for the above stated reasons. The argument that the above is flawed because the examiner does not recognize that the "product by product" and functional limitations in the claim narrow the claimed dispersing resin and the claimed molar ratio respectively, i.e., the breadth of the claim (Wands factor A) is narrower than the other claims. This argument is addressed above regarding applicant's prior arguments regarding narrowness of the instant claims. The test argued by the applicant requires consideration of an infinite number of combinations of ingredients and amounts thereof to determine if they possess the the instantly claimed properties. This is undue experimentation because it is impossible to achieve. The instant claims are limited to no particular molar ratio and the applicant has not shown that the molar ratio per se is alone responsible for giving the claimed properties. Arguments above regarding the infinite number of combinations of ingredients, amounts, particulars thereof and their expected effect on the final composition are again noted. Argument of simply repeating the experiment of the instant specification requires doing so for an infinite number of compositions, which is impossible and therefore undue. Applicant's arguments regarding MPEP 2164.06 are rebutted by the above statements and cited case law.

It is not seen how to choose all ingredients and amounts thereof to give the properties of the instant claims within the full scope of the instant claims. As stated above, this would require an infinite amount of experimentation. The arguments regarding MPEP 2164.05(a) are noted but do not contradict the caselaw cited herein. This rejection meets the requirements of the cited caselaw. The applicant provides not persuasive evidence to the contrary. The applicant's argument that the non-disclosed material is well known will be considered as evidence in the following 103 rejection(s). The applicant is herein queried specifically if the claimed material is well known to the ordinary skilled artisan, as appears to be argued by the applicant at page 10, last paragraph of their response of 10/7/09. The rationale of paragraph 4.A. above is repeated herein as rebutting the applicant's arguments regarding this rejection also. The argued examples and portions of the specification are not commensurate in scope with the instant claims. This rejection clearly is one of "scope of enablement". The applicant has not demonstrated that the argued molar ratios give the full scope of properties of the instant claims 19-20, including the full scope of the ranges claimed therein. The above clealry shows that "without undue experimentation" is not met by the instant situation.

The applicant's arguments have been fully considered regarding the instant rejection but are not persuasive for the above reasons. For the above reasons, this rejection is maintained.

7. Claims 1-10 and 12-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. It is unclear what is intended by the instant claim language, of the instant claims 1-10 and 12-20, "said dispersing resin being formed by polymerizing monomers comprising at least one monomer selected from the group consisting of styrene, acrylic acid, methacrylic acid, acrylate

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and methacrylate”, particularly in view of the preceding claim language “a dispersing resin containing a first repeating unit structure having an unneutralized group and a second repeating unit structure having a neutralized group and capable of being hydrated and/or dissolved in water, a water-soluble organic solvent capable of swelling and/or dissolving the first repeating unit structure, and water, wherein the first repeating unit structure has a molar ratio in the range of from 1% to 67% based on the sum of the first repeating unit structure and the second repeating unit structure”.

It is unclear if the full scope of the newly added language is intended, particularly “at least one monomer” which appears to encompass homopolymers of the recited monomers, including styrene and the (meth) acrylates or if the combination of all of the claimed limitations regarding the claimed “dispersing resin” are required, in which case it is unclear what is intended by “at least one”.

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-6, 8-10, and 12-20 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 99/50365 Yeates et al..

Yeates discloses the instantly claimed compositions at the abstract; page 1, lines 1-36, particularly 23-29; page 2, lines 1-38, particularly 5-21, of which the partial neutralization gives the instantly claimed structures I and II; page 3, lines 1-37, particularly 1-10; page 6, lines 1-39, particularly 19-24; page 7, lines 1-39, particularly 15-31, more particularly lines 17-18, which fall within the scope of the instant claim 4, lines 23-24 of which the polyalkylene glycols fall within the scope of the instant claim 3, and line 28, which falls within the scope of the instant claim 2; page 9, lines 4-19, particularly 14-19, where the buffers that give the alkaline pHs fall within the scope of the instant claims 13-14; and the remainder of the document. Given the lack of specificity of the claimed first and second repeating unit structures of the instant claims, the polymers of the reference can be divided into any structures desired so as to meet the limitations of the instant claims, including those of the instant claims 19 and 20 and the instantly claimed amounts thereof. The reference specifies polymers comprising at least one of the monomers of the instant claims 1 and 19. Polymers are a mixture of varying molecules as evidenced by average polymer concepts such as molecular weight, functionality, and monomer distribution. Since the instant claims 15-16 do not specify the polymers of these claims, some portion of the polyacrylate of the reference may be taken that meets the limitations of these claims. The ink jet printed and resulted printed substrate of the reference meet the instant claims 17-18.

The applicant's argument that the instantly claimed composition gives high storage stability is not supported for the full scope of the instant claims which do not define the instantly claimed first and second repeating structures nor require any specified storage stability. As such any of the repeating structures of the reference can be defined so as to meet the instantly claimed amounts. It is noted that the instant claim 1 does not have the same requirement of the instant

claim 19 that the first repeating unit structure be carboxyl. As such any structure, even if unneutralizable, reads on the instantly claimed first repeating unit structure. The applicant's arguments are therefore not commensurate in scope with the instant claims and the cited prior art. "Partially neutralized" of page 2, line 17 of the reference will fall within the instantly claimed broad range of amounts because of the lack of definition of the instant claims as to what constitutes the claimed repeating unit structures, including those of the instant claims 1, 19, and 20. As such, the polymer of the reference can necessarily be divided into units that meet the instantly claimed amounts. Given the similarity or sameness of the polymer of the reference, as discussed above, it is expected that the instantly claimed properties of the instant claims 19-20 will be necessarily inherent in the compositions of the reference, as evidenced by the applicant's arguments in this regard including the applicant's argument inferring that choosing the instantly claimed amount of neutralized and unneutralized repeating units gives the argued stability is well known (page 10, last paragraph of the applicant's response of 10/7/09). Applicant's arguments regarding monomers disclosed in the instant specification at page 9 of the latest response are not commensurate in scope with the instant claims, which are not limited to the argued monomers. It is impermissible to read limitations from the specification into the claims and the claims are to be interpreted in their broadest reasonable sense. The argued examples are not commensurate in scope with the instant claims and the cited prior art for the reasons stated above, particularly the lack of definition of what constitutes the claimed repeating unit structures, which encompasses blocks of monomers. The continued lack of specifying what constitutes the claimed repeating unit structures allows the prior art polymer molecules to be divided in almost any manner such as to meet the instantly claimed molar requirements. This fact remains unaddressed by the instant

claim language. These arguments and facts rebut the applicant's arguments regarding the repeating units and the molar ratios of the instant claims. For the same reasons, the applicant's examples are not commensurate in scope with the instant claims, e.g. the lack of specificity of what constitutes the claimed repeating unit structures. As stated above, the examiner may divide the polymer molecules of the cited prior art in any manner possible that yields the required repeating unit structures and molar ratios. The repeating unit structures need not be monomer units per the instant claim language but may be sequences of monomers for any given repeating unit structure. In terms of storage stability, all such inks must have a sufficient shelf life to go from manufacture to market to end use, which takes much time. The inks of the cited prior art are therefore expected to necessarily have excellent storage stability, though this is clearly a relative term. The applicant has not demonstrated a recognized result for the instant claim limitations related to the claimed repeating unit structures and the claimed molar ratios thereof in a manner commensurate in scope with the instant claims particularly given the lack of specificity as to what constitutes the repeating unit structures. This rebuts applicant's arguments relating to MPEP 2144.05(II)(B). There is no probative evidence that the inks of the cited prior art do not inherently have the requirements of the instant claim 19, as noted above. The reasons stated in the scope of enablement rejection above are repeated herein to rebut the applicant's arguments that the functional language of the instant claim 19 makes it commensurate in scope with the evidence in the instant specification. For the above stated reasons, particularly those relating to the lack of definition of the instantly claimed repeating unit structures, the comparative examples of the instant specification are not closer comparisons than the cited prior art. The evidence that claim 19 is not commensurate in scope with the evidence of record is a *prima facie* consideration

of the scope of the claims verses the scope of the evidence of record. They simply are not equal in scope when compared side by side. This is a purely quantitative analysis and in no way is it "conclusory". See the above rationales relating to this issue and particularly note the above discussions relating to the instant claims' lack of specification of what is encompassed by the claimed repeating unit structures. Given the lack of specificity as to what constitutes repeating unit structures, which the examiner interprets as including blocks of monomers, it is not seen that partial neutralization or the equilibria of carboxylic acid and weak base does not necessarily give the instantly claimed molar ratio of the instant claim 19. It is expected that partial neutralization or even complete neutralization of COOH with weak base will give the instantly claimed amount of carboxylic acid groups falling within the scope of the broad range of the instant claim 19 based on the equilibria of such neutralization as well as the lack of specificity as to what constitutes repeating unit structures, which the examiner interprets as including blocks of monomers.

The newly recited arguments do not address the above claim interpretation, particularly in view of the scope of the claimed "repeating unit structure" discussed above. It is not seen that "evidence" is necessary to support this clear claim interpretation. There is nothing conclusory about this claim interpretation. The applicant's arguments are not commensurate in scope with the above rejection and the instant claims, particularly as interpreted above. The applicant has not defined the instantly claimed repeating units to exclude this interpretation. The argument that the invention does not reside in what the repeating units are but in the ratio of the neutralized and unneutralized groups irrespective of the kinds of these groups misses the point that the amounts of the repeating units are required to arrive at the claimed ratios thereof. Interpreting

the repeating unit within the scope of the claims, as stated above, allows various ratios to be culled from the disclosure of the cited prior art, including those of the instant claims, because the instantly claimed ratios are a function of the structure/identity of the repeating units necessarily.

The claims do not recite molar ratios of neutralized verses unneutralized groups. The molar ratios are related to the repeating unit structures. See the instant claim language. The applicant's arguments are therefore not correct and are not commensurate in scope with the instant claim language. The examiner maintains that blocks may be the instantly claimed repeating units. The rejection is not withdrawn and the applicant's representative is directed to reconsider the instant claim language and the above stated interpretation thereof. The argued section of the MPEP is not commensurate in scope with this rejection which relies on the variance allowed by the instant claim language in what constitutes a "repeating unit structure" and thus clearly allows the polymer of the cited prior art to be divided into any repeating unit structure that gives the instantly claimed broad ratio. No provative evidence commensurate in scope with the instant claim language and the cited prior art is seen.

The applicant's arguments have been fully considered but are not persuasive for the reasons stated above and the teachings of the cited prior art. This rejection is therefore maintained.

11. Claims 1-6, 8-10, and 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/50365 Yeates et al..

Yeates discloses the instantly claimed compositions at the abstract; page 1, lines 1-36, particularly 23-29; page 2, lines 1-38, particularly 5-21, of which the partial neutralization gives the instantly claimed structures I and II; page 3, lines 1-37, particularly 1-10; page 6, lines 1-39, particularly 19-24; page 7, lines 1-39, particularly 15-31, more particularly lines 17-18, which

fall within the scope of the instant claim 4, lines 23-24 of which the polyalkylene glycols fall within the scope of the instant claim 3, and line 28, which falls within the scope of the instant claim 2; page 9, lines 4-19, particularly 14-19, where the buffers that give the alkaline pHs fall within the scope of the instant claims 13-14; and the remainder of the document. Given the lack of specificity of the claimed first and second repeating unit structures of the instant claims, the polymers of the reference can be divided into any structures desired so as to meet the limitations of the instant claims, including those of the instant claims 19 and 20 and the instantly claimed amounts thereof. The reference specifies polymers comprising at least one of the monomers of the instant claims 1 and 19. Polymers are a mixture of varying molecules as evidenced by average polymer concepts such as molecular weight, functionality, and monomer distribution. Since the instant claims 15-16 do not specify the polymers of these claims, some portion of the polyacrylate of the reference may be taken that meets the limitations of these claims. The ink jet printed and resulted printed substrate of the reference meet the instant claims 17-18.

The prior art does not exemplify the instantly claimed inventions in the same language as used in the instant claims.

It would have been obvious to one of ordinary skill in the art at the time of the instantly claimed invention to use the above discussed combinations of ingredients and amounts thereof because they are encompassed by the reference and would have been expected to give the printing properties described by Yeates. There are no unexpected results seen which are demonstrated in a manner commensurate in scope with the instant claims and the cited prior art. Given the similarity or sameness of the polymer of the reference, as discussed above, it is expected that the instantly claimed properties of the instant claims 19-20 will be necessarily

inherent in the compositions of the reference, as evidenced by the applicant's arguments in this regard including the applicant's argument inferring that choosing the instantly claimed amount of neutralized and unneutralized repeating units gives the argued stability is well known (page 10, last paragraph of the applicant's response of 10/7/09).

The applicant's argument that the instantly claimed composition gives high storage stability is not supported for the full scope of the instant claims which do not define the instantly claimed first and second repeating structures nor require any specified storage stability. As such any of the repeating structures of the reference can be defined so as to meet the instantly claimed amounts. It is noted that the instant claim 1 does not have the same requirement of the instant claim 19 that the first repeating unit structure be carboxyl. As such any structure, even if unneutralizable, reads on the instantly claimed first repeating unit structure. The applicant's arguments are therefore not commensurate in scope with the instant claims and the cited prior art. "Partially neutralized" of page 2, line 17 of the reference will fall within the instantly claimed broad range of amounts because of the lack of definition of the instant claims as to what constitutes the claimed repeating unit structures, including those of the instant claims 1, 19, and 20. As such, the polymer of the reference can necessarily be divided into units that meet the instantly claimed amounts. Given the similarity or sameness of the polymer of the reference, as discussed above, it is expected that the instantly claimed properties of the instant claims 19-20 will be necessarily inherent in the compositions of the reference, as evidenced by the applicant's arguments in this regard including the applicant's argument inferring that choosing the instantly claimed amount of neutralized and unneutralized repeating units gives the argued stability is well known (page 10, last paragraph of the applicant's response of 10/7/09). Applicant's arguments

regarding monomers disclosed in the instant specification at page 9 of the latest response are not commensurate in scope with the instant claims, which are not limited to the argued monomers. It is impermissible to read limitations from the specification into the claims and the claims are to be interpreted in their broadest reasonable sense. The argued examples are not commensurate in scope with the instant claims and the cited prior art for the reasons stated above, particularly the lack of definition of what constitutes the claimed repeating unit structures, which encompasses blocks of monomers. The continued lack of specifying what constitutes the claimed repeating unit structures allows the prior art polymer molecules to be divided in almost any manner such as to meet the instantly claimed molar requirements. This fact remains unaddressed by the instant claim language. These arguments and facts rebut the applicant's arguments regarding the repeating units and the molar ratios of the instant claims. For the same reasons, the applicant's examples are not commensurate in scope with the instant claims, e.g. the lack of specificity of what constitutes the claimed repeating unit structures. As stated above, the examiner may divide the polymer molecules of the cited prior art in any manner possible that yields the required repeating unit structures and molar ratios. The repeating unit structures need not be monomer units per the instant claim language but may be sequences of monomers for any given repeating unit structure. In terms of storage stability, all such inks must have a sufficient shelf life to go from manufacture to market to end use, which takes much time. The inks of the cited prior art are therefore expected to necessarily have excellent storage stability, though this is clearly a relative term. The applicant has not demonstrated a recognized result for the instant claim limitations related to the claimed repeating unit structures and the claimed molar ratios thereof in a manner commensurate in scope with the instant claims particularly given the lack of specificity

as to what constitutes the repeating unit structures. This rebuts applicant's arguments relating to MPEP 2144.05(II)(B). There is no probative evidence that the inks of the cited prior art do not inherently have the requirements of the instant claim 19, as noted above. The reasons stated in the scope of enablement rejection above are repeated herein to rebut the applicant's arguments that the functional language of the instant claim 19 makes it commensurate in scope with the evidence in the instant specification. For the above stated reasons, particularly those relating to the lack of definition of the instantly claimed repeating unit structures, the comparative examples of the instant specification are not closer comparisons than the cited prior art. The evidence that claim 19 is not commensurate in scope with the evidence of record is a *prima facie* consideration of the scope of the claims versus the scope of the evidence of record. They simply are not equal in scope when compared side by side. This is a purely quantitative analysis and in no way is it "conclusory". See the above rationales relating to this issue and particularly note the above discussions relating to the instant claims' lack of specification of what is encompassed by the claimed repeating unit structures. Given the lack of specificity as to what constitutes repeating unit structures, which the examiner interprets as including blocks of monomers, it is not seen that partial neutralization or the equilibria of carboxylic acid and weak base does not necessarily give the instantly claimed molar ratio of the instant claim 19. It is expected that partial neutralization or even complete neutralization of COOH with weak base will give the instantly claimed amount of carboxylic acid groups falling within the scope of the broad range of the instant claim 19 based on the equilibria of such neutralization as well as the lack of specificity as to what constitutes repeating unit structures, which the examiner interprets as including blocks of monomers.

The newly recited arguments do not address the above claim interpretation, particularly in view of the scope of the claimed "repeating unit structure" discussed above. It is not seen that "evidence" is necessary to support this clear claim interpretation. There is nothing conclusory about this claim interpretation. The applicant's arguments are not commensurate in scope with the above rejection and the instant claims, particularly as interpreted above. The applicant has not defined the instantly claimed repeating units to exclude this interpretation. The argument that the invention does not reside in what the repeating units are but in the ratio of the neutralized and unneutralized groups irrespective of the kinds of these groups misses the point that the amounts of the repeating units are required to arrive at the claimed ratios thereof. Interpreting the repeating unit within the scope of the claims, as stated above, allows various ratios to be culled from the disclosure of the cited prior art, including those of the instant claims, because the instantly claimed ratios are a function of the structure/identity of the repeating units necessarily. The claims do not recite molar ratios of neutralized versus unneutralized groups. The molar ratios are related to the repeating unit structures. See the instant claim language. The applicant's arguments are therefore not correct and are not commensurate in scope with the instant claim language. The examiner maintains that blocks may be the instantly claimed repeating units. The rejection is not withdrawn and the applicant's representative is directed to reconsider the instant claim language and the above stated interpretation thereof. The argued section of the MPEP is not commensurate in scope with this rejection which relies on the variance allowed by the instant claim language in what constitutes a "repeating unit structure" and thus clearly allows the polymer of the cited prior art to be divided into any repeating unit structure that gives the

instantly claimed broad ratio. No provative evidence commensurate in scope with the instant claim language and the cited prior art is seen.

The applicant's arguments have been fully considered but are not persuasive for the reasons stated above and the teachings of the cited prior art. This rejection is therefore maintained.

12. Claims 1-10 and 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/50365 Yeates et al. in view of EP 0899311 A1 Yamazaki et al..

Yeates discloses the instantly claimed compositions at the abstract; page 1, lines 1-36, particularly 23-29; page 2, lines 1-38, particularly 5-21, of which the partial neutralization gives the instantly claimed structures I and II; page 3, lines 1-37, particularly 1-10; page 6, lines 1-39, particularly 19-24; page 7, lines 1-39, particularly 15-31, more particularly lines 17-18, which fall within the scope of the instant claim 4, lines 23-24 of which the polyalkylene glycols fall within the scope of the instant claim 3, and line 28, which falls within the scope of the instant claim 2; page 9, lines 4-19, particularly 14-19, where the buffers that give the alkaline pHs fall within the scope of the instant claims 13-14; and the remainder of the document. Given the lack of specificity of the claimed structures I and II of the instant claims, the polymers of the reference can be divided into any structures desired so as to meet the limitations of the instant claims 5-6 and 11-12. Polymers are a mixture of varying molecules as evidenced by average polymer concepts such as molecular weight, functionality, and monomer distribution. Since the instant claims 15-16 do not specify the polymers of these claims, some portion of the polyacrylate of the reference may be taken that meets the limitations of these claims. The ink jet printed and resulted printed substrate of the reference meet the instant claims 17-18.

It would have been obvious to one of ordinary skill in the art at the time of the instantly claimed invention to use the above discussed combinations of ingredients and amounts thereof because they are encompassed by the reference and would have been expected to give the printing properties described by Yeates and to use carbon black of the instant claim 7 therein because carbon black is encompassed by the broadly claimed “colorant” of the claims of Yeates, e.g. claim 1, and is shown by Yamazaki to be a conventional black colorant for acrylic based ink jet inks which is expected to contribute its well known colorant properties to the inks of Yeates.

This rejection is maintained for the reasons stated with regard to Yeates et al. alone in paragraph 11 above.

The applicant’s arguments have been fully considered but are not persuasive for the reasons stated above and the teachings of the cited prior art. This rejection is therefore maintained.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick D. Niland whose telephone number is 571-272-1121. The examiner can normally be reached on Monday to Friday from 10 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Patrick D Niland/  
Primary Examiner  
Art Unit 1796